200300319

#### THE UNIVERD SHATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

#### Monsanto Company

MUCCUS, THERE HAS BEEN PRESENTED TO THE

#### Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANTISS INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANTISS IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE. BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, AR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR CONDITIONING IT REPROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR REENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE STATES SEED OF THIS VARIETY (I) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SA. (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS (84 STAT.)

WHEAT, COMMON

'Baker's White'

In Testimone Therest I have hereunto set my hand and caused the seal of the Hant Taxista Fresterion Office to be affixed at the City of Washington, D.C. this twenty-sixth day of February, in the year two thousand and four.

Bemze

Commissioner Plant Variety Protection Office Agricultural Warbeting Service Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE DIVISION - PLANT VARIETY PROTECTION	OFFICE	The following statements are made in accorda 1974 (5 U.S.C. 552a)	
APPLICATION FOR PLANT VARIETY PROTECTION (Instructions and information collection burden statement on		Application is required in order to determine certificate is to be issued (7 U.S.C. 2421) Infountil certificate is issued (7 U.S.C. 2426).	
NAME OF APPLICANT(S) (as it is to appear on the Certificate)  Monsanto Company	-	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER W98-506W	3. VARIETY NAME  Baker's White
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code)		5. TELEPHONE (include area code)	
700 Chesterfield Parkway North St. Louis, Missouri 63198		636-737-6089	2003 0 0 3 1
		6. FAX (include area code) 636-737-7250	
7. GENUS AND SPECIES NAME	8. FAMILY NAME (Bo	tonical)	FILING AND EXAMINATION FEE:
Triticum aestivum	Gramineac	;	\$\bar{22}\chi_{2003}\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\
9. CROP KIND NAME (common name)			S DATE
Hard White Winter Wheat			1 3652.00
10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORG.	ANIZATION (corporation,	partnership, association.etc.) (common name)	- C
Corporation			CERTIFICATION FEE  V H 32.00
11. IF INCORPORATED, GIVE STATE OF INCORPORATION	<del></del>	12. DATE OF INCORPORATION	02/03/2004
Delaware		1933	02/03/2004
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, Ms. Sally Metz D	ro serve in this appi r. Rollin Sears	ICATION AND RECEIVE ALL PAPERS	636-737-6089
	515 Ascher Road		
St. Louis, Missouri 63198 Ju	metion City, Kan	sas 66441	15. FAX (include area code)
			636-737-7250
16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (R	ollow instructions on rever	se)	
<ul> <li>a. X</li> <li>b. X</li> <li>Exhibit A. Origin and Breeding History of the Variety</li> <li>b. X</li> <li>Exhibit B. Statement of Distinctness</li> </ul>			
c. X Exhibit C. Objective Description of the Variety			
d. X Exhibit D. Additional Description of the Variety			
e. X Exhibit E. Statement of the Basis of the Applicant's Ov	-		
f. X Voucher Sample (2,500 viable untreated seeds, or, for tuber p			public repository)
g. X Filing and Examination Fee (\$2,450), made payable to  17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SO			Section 83 (a) of the Plant Variety Projection Act )
X YES (if "yes", answer items 18 and 19 below)		NO (if 'no", go to item 20)	
18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIN	WITED AS TO NUMBER	19. IF YES TO ITEM 18, WHICH CLASSES O	F PRODUCTION BEYOND BREEDERS SEED?
GENERATIONS?  YES  X	NO	FOUNDATION REGISTER	RED CERTIFIED
20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BY YBS (iF "YES", give names of countries and dates)	EEN RELEASED, USED, X	· · · · · · · · · · · · · · · · · · ·	U.S. OR OTHER COUNTRIES?
21. The applicant(s) declare that a viable sample of basic seed of the variety will be applicable, or for a tuber propagated variety a tissue culture will be deposited in			nce with such regulations as may be
The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or Section 41, and is entitled to protection under the provisions of Section 42 of the	-		l stable as required in
Applicant(s) is(are) informed that false representation herein can jeopardize prot			
SIGNATURE OF APPLICANT (Owners)		SIGNATURE OF APPLICANT (Owner	s})
NAME (Please print or type)		NAME (Please print or type)	
Sally Metz		Dr. Rollin Sears	
CAPACITY OR TITLE Director Wheat Technology	6/11/03	CAPACITY OR TITLE Co-Manager, Wheat Busin	DATE ess
SD-470 (O4-95)	7 /	(See reverse for instruc	tions and information collection burden statement)

## Exhibit A. Origin and Breeding History of Baker's White

Bakers White is a cross between Ponderosa/Jagger. The F1 was produced in 1995 in the greenhouse and designated 95x0982. F2 seed was planted at Nardin, OK in 1996 and evaluated for maturity, disease resistance and agronomic type. F3 seed was space planted and in 1997 F3 plants were selected based upon maturity, plant height, disease resistance and agronomic type. F4 rows were planted and one F4 row from this population was selected based upon disease resistance, agronomic type and plant height and named W98-506W. Baker's White has been tested in replicated yield trials across the southern and central Great Plains since 1999. It has been stable and true breeding since 2001.

In 1999 eight progeny plots were grown in Berthoud, Colorado of which four were selected. These four progeny plots were bulked to grow a 0.2 acre Breeders seed increase in Berthoud, CO in 2001 which produced 116 pounds of Breeders seed. In 2002 a nine acre Breeders seed increase was grown in Garden City, Kansas that produced 10,608 pounds of Foundation seed.

Baker's White has been uniform and stable since 2001. Less than 0.8% of the plants were rogued from the Breeders seed increase in 2001. Approximately 90% of the rogued variant plants were taller height wheat plants (8 to 15 cm). Up to 1% variant plants may be encountered in subsequent generations.

### Exhibit B. Statement of Distinctness

Baker's White is most similar to the hard white winter wheat 'Oro Blanco'. However it can be distinguished by the following characteristics

- Baker's White has an oblique shoulder shape on the glume (Berthoud, CO 2000, 2001). Oro Blanco has an apiculate shoulder shape on the glume (Berthoud, CO 2000, 2001).
- Baker's White flag leaf is a 90 degree angle from the stem at boot stage (Berthoud, CO 2000, 2002). Oro Blanco has a recurved flag leaf at boot stage (Berthoud, CO 2000, 2002).

# U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE DIVISION BELTSVILLE, MARYLAND 20705

#### OBJECTIVE DESCRIPTION OF VARIETY

WHEAT (Triticum Spp.)

NAME OF APPLICANT(S)	FOR OFFICIAL USE ONLY
Monsanto Company	PVPO NUMBER 2003 0 0 3 1 9
ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Co.	
700 Chesterfield Parkway North	DESIGNATION
St. Louis, Missouri 63198	Baker's White
Place the appropriate number that describes the varietal character of this variety Place a zero in the first box when number is either 99 or less or 9 or less respect minimum of 100 plants. Comparative data should be determined from varieties standard may be used to determine plant colors; designate system used. Please answer all questions for your variety; lack of response may delay progress.	ively. Data for quantitative plant characters should be based on a entered in the same trial. Royal Horticultural Society or any recognized
1. KIND:	
1 1=Common 2=Durum 3=Club 4=Oth	er (specify)
2. VERNALIZATION:	
2 1=Spring 2=Winter 3=Other (specify)	
3. COLEOPTILE ANTHOCYANIN:	
1 1=Absent 2=Present	
4. JUVENILE PLANT GROWTH:	
2 1=Prostrate 2=Semi-erect 3=Erect	
5. PLANT COLOR (boot stage):	
2 1 = Yellow-Green 2 = Green 3 = Blue-Gree	on.
6. FLAG LEAF (boot stage):	
0 1 = Erect 2 = Recurved *90 degree angle fro	m stem
2 1 = Not Twisted 2 = Twisted	
7. EAR EMERGENCE:	
0 0 Number of Days Earlier Than	same as Oro Blanco *
0 0 Number of Days Later Than	*
8. ANTHER COLOR:	
1 = YELLOW 2 = PURPLE	
9. PLANT HEIGHT (from soil to top of head, excluding awns):	
0 5 cm Tailer Than	Oro Blanco *
0 0 cm Shorter Than	*

<sup>\*</sup> Relative to a PVPO-Apprved Commercial Variety Grown in the Same Trial

Other (specify)

Other (specify)

Other (specify)

Other (specify)

Field races

Field races
Other (specify)

Other (specify)

Other (specify)

Wheat Streak Mosaic Virus (WSMV)



Exhibit	C (wheat) Page 4 Baker's w	nite						. 41	
15. IN	SECT: (0=Not Tested; 1=Susceptible; SPECIFY BIOTYPE (where needed)	2=Resistant;	3=Intermediate;	4=Tolerant)	2003	0	03		
0	Hessian Fly (Mayetiola destructor)		Other (specify)						
0	Stem Sawfly (Cephus spp.)		Other (specify)						
0	Cereal Leaf Beetle (Oulema melanopa)		Other (specify)	<del></del>					
0	Russian Aphid (Diuraphis noxia)		Other (specify)						
0	Greenbug (Schizaphis graminum)		Other (specify)		<del> </del>				
0	Aphids						•		
16. AI	DDITIONAL INFORMATION ON ANY ITEM A	BOVE, OR GEN	ERAL COMMENTS	S:					-
	None						_		
					····		_		
							_		

### Exhibit D. Additional Description of Baker's White

Baker's White is a hard white winter wheat bred and developed by Agripro Wheat. Baker's White is adapted to the Central High Plains. Baker's White is a medium height semidwarf wheat with medium maturity and good straw straw. Baker's White provides resistance to Soilborne Mosaic Virus and Spindle Streak Mosaic Virus, is moderately susceptible to Leaf rust, and Stripe rust and is moderately resistant to Wheat Streak Mosiac Virus. Baker's White is susceptible to Powdery Mildew.

Juvenile growth habit is semi-erect. Auricle anthocyanin and auricle hairs are present. Plant color at boot stage is green. Anther color is yellow. Flag leaf at boot stage is a 90 degree angle to the stem and twisted. Head shape is strap and awned. Glume shoulder shape is oblique with a long acuminate beak. Chaff color is white at maturity. Seed shape is ovate. Seed depth is shallow and width is narrow. Seed cheeks are rounded.

Year: 2000	000			Wht	된	造		Peak	Peak		Norris		Mix	Loaf				
LabNo	Designation	-0 -	Code	Prot	Prot	PΙΑ	Ash	Time	ij	ភ្ន	Hard	ABS	Time	ş	Grain	Tex	Color	Comments
1097	ORO BLANCO	පු .	8001		12.2	66.5	0.46	4.50	5.00	1304	93	62.0	4.50	1000	ო	'n	4	
1207	ORO BLANCO	g,	8001		12.0	9.69	0.48	4.25	5.00	984	118	60.5	4.25	910	m	· m	. 63	
1098	PLATTE	ပ	8002		10.9	68.3	0.48	4.50	5,25	1390	137	63.5	4.75	980	4	· m	. (7)	
1208	PLATTE	e G	8002	13.4	12.5	69.3	0.53	4.00	5.00	1173	125	62.0	4.00	965	· ro	0 60	4	
1102	TREGO	ဌ	8006		10.3	68.7	0.47	3.75	5.00	1085	<u>‡</u>	59.0	3.75	980	4	, m	- 03	
1115	TREGO	ප	8106		10.5	888		3.50	5.00	1077	140	58.5	3.50	880	4	· m	e es	
1212	TREGO	SP	8006	12.9	11.9	71.2	0.50	2.75	5.00	943	137	0.09	2.75	975	4	, m		
100	NuFrontier	ဌ	8004		11.5	68.7	0.45	4.00	5.00	1160	125	60.5	00,4	940	. 4	, m	, es	
1210	NuFrontier	S S	8004		12.5	68.3	0.48	3.50	4.75	1164	117	0.09	3.50	965	· un	· e:		ď
<del>1</del>	NuHorizon	g G	8005		11.3	67.0	0.55	5.50	5.00	1301	137	59.5	00'9	920	. 10	· en		
1211	NuHorizon	S D	8005	13.4	12.0	0.69	0.51	5.00	4.75	1314	128	60.0	2.00	096	4	۰ ۵	. (1)	
1105	W96-054W	ප	8012		11.0	67.0	0.46	3.00	5.00	917	146	59.0	3.00	920	· 00	ı ۳	, es	
1215	W96-054W	S D	8012	13.5	12.6	67.9	0.50	2.50	5.00	958	134	61.0	2.50	955	4	n	(0)	
1107	W98-506W	ප	8018		11.5	66.4	0.44	9.00	4.00	1303	149	61.0	6.00	885	4	· го	(1)	
1217	W98-506W	မှ	8018		13.0	20.0	0.48	4.50	4.75	1363	137	61.0	4.50	066	4	4		Œ
1108	W98-530W	ප	8025		11.4	68.5	0.48	6.25	5.00	1356	<del>3</del> 8	0.09	6.25	870	4	m		ı
1218	W98-530W	S G	8025	13.6	12.8	70.0	0.49	5.00	4.75	1314	<u>동</u>	61.0	5.00	960	4	m	ო	
1113	W98-538W	ဝ	8048		11.6	67.9	0.43	5.50	4.75	1497	139	61.0	5.50	935	4	ന	ო	
1223	W98-538W	S D	8048		12.4	2 69	0.56	4.75	5.00	1265	13	61.0	4.75	970	4	ო	ന	
***************************************	_				í	i		; ;	;									
Tear.zous	. '	,		<u> </u>	Y.	ĭ		PEAK	PEAK				¥	LOAF				
LabNo	Designation	Š	epo O	PROT	PROT	Ž Z	ASH	Time	Ì	덛	NHARD	ABSOR	TIME	۷ V	Grain	Tex	Color	Com
8	TREGO	占	5	13.5	12.5	71,4	0.444 44	2.50	5.25	832	81	62.0	2.50	940	4	6	ო	
<del>2</del>	PLATTE	占	402	15.1	14.0	70.5	0.432	3.25	5.25	98	¥	65.5	3.25	936	4	3	ო	
1887	ORO BLANCO	占	<b>₽</b>	14.6	13.7	20.3	0.434	3.75	5,00	22	ξ	6,5	3.75	996	4	6	4	
1888 88	SOLOMON	占	\$	4.8	13.8	6.69	0.448	4.75	5.00	1160	88	65.0	4.75	98	ო	ю	έ	~
<u>88</u>	BETTY	占	<del>\$</del>	15.0	14.2	70.2	0.460	3,00	5.25	<b>9</b> 8	윮	2.29 5.5	3.00	1040	4	2	ო	
90	HEWE	占	406	14.9	14. 2	71.2	0.436	2.75	5.00	320	æ	64.5	2.75	96	ĸ	60	m	
189	LAKIN	占	407	13.8	12,8	70.7	0.404	3.00	5.25	939	29	62.5	3.00	985	ĸ	2	ო	
1882	NUPLAINS	겁	804	15.4	13.8	69.7	0.416	2.75	5.00	720	92	0.70	2.75	066	4	3	6	
1883	INTRATA	占	409	14.6	13.6	71.2	0.434	2.50	5.00	743	55	5.5	2.50	1000	4	8	e	
1998	W98-530W	占	415	13.5	12.5	71.8	0.438	3.75	5.00	1110	92	63.0	3.75	066	ო	3	es	
1899	W98-506W	占	416	14.6	13.3	71.0	0.424	4.00	4.50	1214	<u>ه</u>	0.70	4.00	975	4	8	ო	
1900	NUHORIZON	占	421	13.5	12.1	71.0	0.432	4.25	4.75	1297	8	63.0	4.25	980	თ	ю	e	
<u>\$</u>	W96-054W	占	422	14.2	12.6	70.9	0.406	2.25	9.00	780	11	62.0	2.25	888	4	es	က	
1902	W98-538W	ద	£23	13.5	12.3	71.1	0.440	4.00	5.00	1068	35	63.0	4.00	098	4	60	eo	
1903 503	NUFRONTIER	ద	424	13.0	12.1	4.1.	0.424	3.25	4.75	945	88	61.0	3.25	006	*	დ	m	

Lines	-	
Summarized Data for Selected Experimental Hard White Wheal	Data provided to AWWPA	Confidential
AgriPro Wheat		

							<u> </u>								
Variety	1999	2000	2001	Average	2001 TW	Maturity	Height	SB/SS S	SRL	LR L	2	PM	WS PF	PPO S	Sprout
# Locations	4	[2]	<u>ত</u>	1	nq/sql	•	)	-						1	<u>.</u>
	pn/a	pn/a	pn/a												
Oro Blanco	8	4	45	56	22	Σ	SD	-							fair
W96-054W	89	42	22	63	61	Σ	SD	_			4			듬	9
W98-506W	87	45	24	63	8	≅	SD	_		ဖ		ω	<b>4</b>	med	fair
W98-530W	87	45	25	61	20	Σ	SD	_		ന				<del>0</del>	9
W98-538W	85	4	ጷ	29	00	Σ	SD	_			O			_ ≱	200

ratings based upon 1 resistant or best, 9 susceptible or worst and observation taken at a minimum of 3 locations

SB/SS = soil borne/spindle streak mosaic virus complex

SR = stem rust

.R = leaf rust

\_C = leaf complex, primarily tan spot & leaf blotch

PM = powdery mildew

WS = wheat streak mosaic

PPO = poly phenyloxidase reaction, these are estimates data needs verification Sprout = tolerance to pre-harvest sprouting

Two Year Data Comparison with current competition (head to head in same trial)

	2000	2001	Average	2001 TW
	pn/a	pn/a		nq/sql
# location	[2]	2		
W96-054W	42	24	20	61
W98-506W	45	27	51	9
W98-530W	45	25	49	59
W98-538W	4	5	47	09
NuFrontier	88	20	47	09
NuHorizon	42	72	48	09
Trego	45	45	45	22
Betty	88	20	47	09
Jagger	4	B	54	00
2137	41	47	49	56

## Exhibit E. Statement of the Basis of Applicant's Ownership

The variety for which Plant Variety Protection is hereby sought was developed by Dr. John Moffatt, an employee of Agripro Wheat. By agreement between employees and Agripro Wheat all rights to any invention, discovery, or development made by the employee while employed by Agripro Wheat, were assigned to Agripro Wheat, with no rights of any kind pertaining to 'Baker's White' being retained by the employees.

By contractual agreement the variety 'Baker's White' was purchased from Agripro Wheat, a business unit of Advanta USA, Inc. in June of 1996 and is currently owned by Monsanto Company.